MARSTON (C.H.) Cholera: its causes to

Marston, C.H. Cholera, its Causes, Prevention & Treatment. 1866 1/-

CHOLERA:

ITS CAUSES, PREVENTION, AND TREATMENT;

BY

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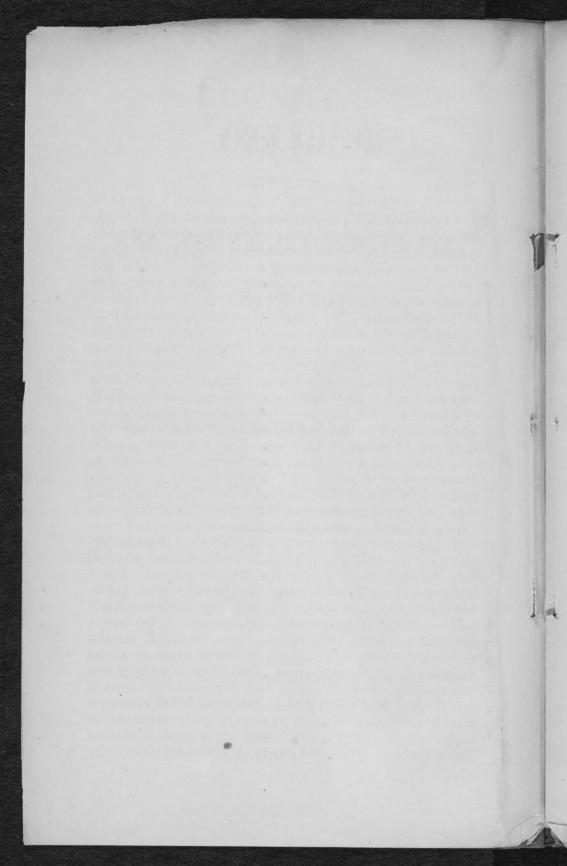
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CHOLERA.

In presence of a disease whose termination is so fatal, whose progress is so rapid, and whose access is involved in so much mystery, there can be little apology needed on the part of any who would desire to instruct or advise the public, who are necessarily so much interested in the matter, so long as the instruction is truthful and the advice prudent. It is not necessary that altogether new theories should be proposed or novel practices urged; every member of the medical profession has his own circle of influence, and those who trust him will be more readily led by his tongue or pen than by volumes of other and strange writers. It is only necessary that the writer should understand the subject of which he writes, and have such an amount of experience as may justify the opinions he proposes; at the same time if he would not merit high censure he must avoid a spirit of dogmatism, and, still more, must free himself from all the trammels of partisanship and medical bigotry. One only object ought to be before him—and that object so great and high and evident, as to deliver him from all reproach—the saving of the lives of his fellow men.

Thirty-five years have now elapsed since this pestilential scourge (at least in the form in which we now know it) first invaded the home of the British Empire. For a century we may trace its occasional existence in its Indian territory, where also occurred in 1817 that terrific outbreak with which our own knowledge and experience of the disease are most intimately connected, and from which our interest in it chiefly dates. Bursting upon the province of Lower Bengal with all the suddenness and violence of a raging fire, and carrying off in a few days from Lord Hasting's army of less than 12,000 fighting men, more than 9,000 victims, it spread its course gradually eastward and southward to China and Chinese Tartary, which latter point it reached about the year 1827. Westerly it proceeded from Hin-

dostan to Persia, where it paused from 1823 to 1829: reappearing after six years' absence at Astrachan, and ascending the Volga it invaded Moscow, where every precaution had been taken to prevent its admission by the most stringent quarantine and the strictest sanitary measures. At this city, in the month of October 1830, 5,532 cases occurred, of which 3,107 were fatal. In the same month of the following year the first case in England occurred at Sunderland; outbreaks speedily occurred in other places, and for 14 months the United Kingdom was the scene of sickness and death never witnessed since the days of the plague. From our own shores it appears to have crossed to America, where it broke out in 1832, and finally disappeared from Europe about 1837, after having ravaged the whole of that continent. It is a remarkable fact that subsequent epidemics of this disease have followed a similar course of travel, overleaping all barriers set to resist its progress, and defying all schemes of quarantine and isolation.

One peculiarity connected with Cholera has always attracted attention, viz., its limitation to particular places and the immunity of certain districts while the disease is raging in the immediate neighbourhood; one part of a town, nay, one side of a street, may be decimated while the other is wholly free. Dr. Alison, in the "Medico Chirurgical Review" for 1854, states that one wing of cavalry regiment just arrived from England, and in high health, ascended the Ganges from Calcutta in boats, there being no Cholera at the time in Calcutta. At a certain period of the voyage it arrived at a part of the country where Cholera prevailed in the villages on the banks of the river, but with which they did not communicate. Here eases of Cholera occurred in the boats; the men were advised to push on rapidly, and after a few days when they had passed the limits of the existence of the disease on the banks, it ceased to show itself in the boats. What makes the case peculiarly conclusive is, that the other wing of the regiment followed afterwards by the same mode of conveyance, became affected with the disease at the same point and lost it again at the same point .-("Aitkin's Science and Practice of Medicine," Vol. 1.) The cause and means of propagation of Cholera. Many

points connected with these must still be held as sub judice. Doubtless it is that the essential cause is a specific poison, but how primarily formed, or how far dependent upon atmospheric causes the existence of that poison may be, has not yet been fully ascertained. My own opinion is (and whether or not I am right in theory, I know that I am practically) that the disease is dependent upon atmospheric influence, operating either by means of some peculiar condition of the elements composing the air or through a miasma floating in it, but that this influence is powerless in the absence of organic impurity, at least upon those who by vice, intemperance, unwholesome living, want of pure air, or cold, are not especially predisposed to it. If we regard the poison as being contained in the air, we may say with certainty that it is a poison of such exceedingly moderate power that unless conjoined with organic impurities artificially produced in the air breathed, or the water drunk, it has slight effect upon persons in the possession of moderate health. The existence of such impurities which it is within the power of man to prevent and remove is, I firmly believe, essential to the existence of Cholera.

However this may be, the poison once developed acts primarily upon the great nervous centres of the sympathetic system and the blood, being capable of indefinitely multiplying itself, after the manner of a ferment, within the body; the excretions passing off from a person affected with Cholera are charged with the poison, and if such by any means find entrance into the body of another, the disease is

almost surely transmitted.

The question of the contagiousness of the disease has been one of warm disputation, and I by no means feel warranted to pronounce dogmatically upon it, but from what I have seen, and from a careful consideration of the evidence on both sides, I may express my matured conviction that so far as mere contact with diseased persons is concerned, little or no risk is run. The danger exists, 1st, in being in a locality in which the disease has originated; and 2ndly, in the involuntary reception of the poisoned excretions which have passed from the bodies of diseased persons. To refer to the instance quoted by Dr. Alison,

only while the boats were in the place in which the disease prevailed did the men suffer; they do not appear to have passed it from one to the other, for as soon as they escaped from the infected district the disease at once stayed. hospitals it does not seem that medical men, nurses, and attendants are especially liable to the disease, nor when patients suffering from this cause have been placed promiscuously in the wards of a hospital has the disease spread markedly among the other patients of the ward. knowledge of these facts is very important and practical. There need be no nervous excitement nor apprehension in visiting or attempting to relieve the sick. The Empress of the French has set a worthy example in visiting almost daily the Cholera wards in the Parisian Hospitals, and it is to be hoped that that example will not only encourage others to do likewise, but that it will go far to dispel that groundless fear which so often seizes upon those who are called into contact with Cholera patients. Dr. Budd, of Clifton, after much experience and careful consideration, believes that the disease is disseminated exclusively by the liquid discharges from the bowels of Cholera patients, and. that it is chiefly communicated-1st, by the soiled hands of the attendants upon the sick; 2nd, by means of bed and body linen tainted with the discharges; and 3rd, through the medium of the soil upon which the discharges have been thrown. Dr. Snow has summed up the modes of propagation of Cholera thus:—1st. The moist excretions may assume the form of vapour and so be swallowed.—2nd. The poison may dry on infected clothing, from which, on being moved or shaken, it may escape as dust and so enter the nostrils and mouth.—3rd. Persons attending the sick may get their hands soiled, and taking food without proper precautions may poison themselves.—Lastly. The utensils such as basins and cups used by the sick—may convey the choleraic matter, or even the cloths on which such utensils, imperfectly washed, have been dried.

Improper diet, impure air, and impure water are undoubtedly the principal *predisposing* causes of the disease; during an epidemic, the latter if impregnated with the matter discharged from the bowels of a patient may become

the actually producing cause. In the first outbreak of the last epidemic in the neighbourhood of Broad Street, Golden Square, it was found that the disease was confined to those who were in the habit of drinking the water from a certain pump in that street, among whom it spread with the greatest rapidity and the severest fatality. On examination it was found that a patient had been brought into the neighbourhood suffering from Cholera, and that the cesspool into which the evacuations had been thrown communicated through the soil with the well supplying the pump. The pump was closed, and the spread of the disease was at once arrested. The case which occurred at Epping last year, in which eleven persons were attacked, of whom eight died, affords another illustration. The well from which they drank was proved to be infected from a neighbouring cesspool, the use of the water was desisted from, and the disease staved. In the two last epidemics in London it was found that among the inhabitants of the same district, numbering upwards of 400,000, the number of deaths in the houses supplied by one water company was 3½ times less than in the houses supplied by another company—the water from the one being comparatively pure, from the other exceedingly foul.*

We come now to consider the means to be adopted during, or in anticipation of, an outbreak of the disease, as

preventatives against it.

Some of these refer especially to the local authorities. Their business indeed it ought to be at all times to have their house in order, especially as some measures—such as altering drains, &c., which may be most essential, cannot prudently be undertaken when the foe is close at hand. The houses of the poor should be regularly visited—filthy rooms and dwellings cleaned — white-washing enforced where necessary—nuisances compulsorily removed—the water of all wells suspected of impurity examined,† and if

† No minute analysis is necessary for this: simple tests may suffice to show the presence or absence of organic matter, and if the volumetric mode of applying them be adopted, a fair estimate of the quantity of such matter may be made.

^{*} With these facts in view, we cannot but look with the greatest reprehension upon those inhabitants of a town who, knowing the great lack of pure water in their town, suffer themselves, from motives of penuriousness or false economy, to oppose every measure for rectifying the evil.

necessary the wells should be closed. Where privies are open, some disinfectant, such as Chloride of Lime or Carbolic Acid, should be daily poured down them, and the authorities should appoint officers whose duty it may be to see that this is done. Suitable buildings should be provided in proper situations as temporary hospitals, to which all medical men in the district should have access, and to which they should be able to send patients coming under their care. This is most essential. It is almost useless to attempt to treat patients in presence of the very causes which have induced the attack, besides which the attendants upon the sick run risk of becoming themselves infected, while every case occurring in a close and unventilated neighbourhood increases the unhealthiness of the place and the danger of contagion.

When the disease exists, the neighbourhood should be visited from house to house every morning; the earliest signs of illness should be enquired for, medical aid should be summoned for those in whom they appear, and who have not yet sought it, and at the earliest moment they should be removed to the hospital. In case of the Cholera having occurred in any house, or existing still therein, the floors should be repeatedly washed with water containing a disinfectant, such as Condy's Fluid, and all articles which have been soiled by the excretions should either be destroyed by fire or thoroughly cleansed by repeated washing in water with Condy's Fluid, in renewed quantities of which they should be allowed to remain for some time. The closet, stool, or pan, which the patient uses should moreover constantly contain the same fluid, or Carbolic Acid, which should be freely added to the contents before they are emptied away. Great care should be taken in disposing of the evacuations. After they have been properly treated with disinfectants, the best, and indeed the only right, thing is to bury them deeply in the earth, pouring more Carbolic Acid over them, and covering the place well over with earth, being however careful in doing this to avoid any proximity to wells of water, lest from any defect in the brickwork of the well any of the matter should permeate the soil and defile the water. Lines as for drying clothes should be hung across the rooms in which persons lie ill of Cholera,

across which should be thrown cloths or flannels well saturated with Condy's Fluid, in the proportion of about one pint to ten or twelve of pure water; the cloths of course should be kept constantly wet.* It would be well for nurses to wear charcoal respirators while attending to the cleansing of the patient and removing the evacuations, and carefully to wash their hands afterwards in water with the Fluid.

To the people themselves, I would say—Be of good courage. Use all precautions, and use them in quietness, hope, and confidence. A panic of fear not only, by depressing the nervous system, predisposes greatly to the disease, but indisposes for the adoption of those measures, by the use of which, under God's good providence, the danger may be very largely diminished. Let all co-operate with the proper authorities in assisting to carry out in their own homes and neighbourhoods the directions which may be given by them. Use all cleanliness, both as regards your persons and your houses. Let nothing be suffered about you capable of producing bad smells. Avoid unwholesome and indigestible food, and such as experience may have shown tends to derange the bowels, especially pork, tainted meat, high game, raw fruit, or raw vegetables. Let the water you drink, if possible, be filtered, + and if there is any reason to suspect its purity, add to each half-pint of water a few drops of Condy's Red Disinfecting Fluid—just sufficient to give the water a pink tinge. Shun all intemperance—take no aperient quack medicines—let your clothing be scrupulously clean and moderately warm, and avoid all sudden chills. If any disposition to diarrheea appear, however slight and however painless, go to or send at once to your medical attendant, who will most probably give you speedy relief. Let these thoughts stimulate you to and encourage you in action-

1. By proper means Cholera may be avoided.

2. By proper treatment, in its early stages, Cholera can be readily cured.

Do all that is necessary; trust in God, and don't be afraid.

^{*} I would suggest this plan in all cases of fever, or indeed wherever there is illness in a close room. No one can imagine the sense of sweetness and freshness which it imparts.

† Lipscombe's filters are the best. They can be obtained at Mr. Mayer's China Warehouse, the Brittex, Devizes.

In addition to this, I advise those living in an infected locality to abstain from the use of spices, aromatic herbs, spirituous liquors, coffee, and excessive use of tea, and to provide themselves with a bottle of a saturated spirituous solution of Camphor,* of which five drops should be taken three or four times a day upon a small lump of sugar.

We have now briefly to point out the symptoms of the disease, and then to describe the method of treatment which

we propose to adopt.

It usually happens during the existence of a Cholera epidemic that Diarrhea is more or less prevalent, and in many cases there is relaxation of the bowels, for the most part almost painless, before the real attack sets in. In other cases there occurs a general feeling of illness, depression of spirits, weight at the pit of the stomach, giddiness, singing in the ears, and an unaccountable sense of weakness and exhaustion. These premonitory symptoms, calling when they do appear for immediate attention, are however by no means constant.

The attack itself most frequently comes on towards the early morning with severe purging; the first stools, except in their violence, resemble those of ordinary diarrhea, but are soon followed by profuse evacuations of a light straw or drab colour, to which have been given the name of Rice Water stools, of which quarts sometimes pass away at a single sitting. Sometimes with the purging, generally later, begins vomiting of a clear watery liquid, which is cast off with great force. At the same time violent cramps occur in the limbs, often in the abdomen, and sometimes through the whole body, clenching the jaws, violently contracting the abdomen back upon the spine, and contracting the trunk into all sorts of unnatural positions. The countenance becomes pallid or of a leaden hue, and assumes a marble staring look; the eyes are sunken and bloodshot and the corneæ flattened; and the lips and tongue turn purple. This appearance of the countenance, so peculiarly charac-

^{*} Consisting of camphor dissolved in an equal weight of rectified spirits, at 60° over proof. Such a solution has been prepared by Mr. Madge, Chemist to the North Wilts Dispensary, 26, New Park-street, Devizes, of whom all the medicines mentioned in this pamphlet may be obtained.

teristic of the disease, may come on very early—it has even been observed before the purging has commenced—or it may not be observable for some time afterwards. The pulse rapidly declines and may no longer be distinguishable at the wrist. The voice grows feeble and unearthly, and the

secretion from the kidneys is suppressed.

From this stage, so full of deep anxiety, and sometimes continuing unchanged for a lengthened period, reaction either gradually sets in, or the disease runs into the second and still more dangerous stage called Collapse. The purging and vomiting diminish, but the stools are passed unheeded under the patient; the breath issues like a stream of frosty air; the surface is deadly cold, pale, bluish or livid, while the forehead, feet and hands, are covered with cold sweat, the hands presenting the shrivelled appearance presented by those of a woman after a day at the washing tub; the cramps continue, filling the patient with agony, and the breathing becomes embarrassed, while intense thirst and burning at the epigastrium torment the sufferer. Yet even now the case is not absolutely hopeless, and our efforts to promote reaction should be pursued with unabated vigour. If the pulse can still be discovered at the brachial artery, if the circulation through the lungs is not permanently impeded, and if the countenance is not increasingly dusky or livid, the patient may yet recover; if the contrary, hope, though not to be wholly abandoned while life continues, must be very small.

The stage of the disease which I have been describing varies much in its duration, sometimes terminating in death in the course of an hour or two, at others continuing as much as 48 hours or even more. The return (I may almost call it) to life is often remarkably rapid, and after lying for hours in an almost corpse-like condition, the patient is in many instances nearly himself again in a very short time. But it is not always that the danger has completely passed even when reaction has occurred, especially when the period of collapse has been very lengthened. The retention of urea (the matter which it is the business of the kidneys to excrete) in the blood, may give rise to dangerous and even fatal symptoms; low forms of fever may occur, inflammation of

the stomach and bowels may set in, diarrhea may continue, or the patient may relapse into the condition from which he has so recently escaped. The stomach may remain irritable and unable to retain the food that is taken: sleep, nature's balmy restorative, may refuse to soothe the weary, restless sufferer; or other diseases of low type, the result of exhaustion and debility, may follow to prolong the period of convalesence or ultimately to obtain a victory for death.

Such is a picture of an average case of Cholera, but there is much diversity in the course which the disease runs. Cases are on record in which patients have been struck down at once, and in the course of even five minutes life has become extinct. Other fatal cases have occurred, in which no discharge from the bowels has come on at all. No greater error could be committed than the supposition that the depression, exhaustion and collapse of Cholera are simply due to the purging. They are essentially caused by the poison itself, of which the diarrhea is only one of the effects. No doubt the peculiar state of the atmosphere which exists during a Cholera epidemic tends to produce diarrhoea, and a person who is debilitated by such diarrhea is rendered much more liable to the full influence of the Cholera poison; but Diarrhœa and Cholera are essentially distinct diseases, and it is erroneous to look upon the one as being simply an aggravated form of the other. The practical inferences from these considerations are—that during the prevalence of the disease, diarrhea, however slight, should not be neglected: it may be the premonition of Cholera, or it may increase the liability to an attack: next, it is unnecessary to be alarmed and excited if the bowels are a little loose— Diarrhœa is not necessarily Cholera.

The all-important question of treatment comes now for consideration, and it is sad to be obliged to mingle with any observations we have to make on a subject really so solemn, a reference to the fierce disputations, discreditable often to both parties, which have occurred between the two opposing schools of Allopathy and Homeopathy. "Inter armos leges silent"—a motto which I might paraphrase, Amidst angry disputations truth is unheard. As to the general questions between the two parties, I have nothing here

to say. If ill myself, I would earnestly desire deliverance from the bigots of either side, and should if possible choose for my attendant a liberal-minded, well-experienced and judicious physician, who would accept truth from whatever quarter it might be presented. Thank God that such men are to be found, both amongst those who are called Homeopathists and amongst those who do not acknowledge allegiance to the principle of homeopathy. If I advert to this at all, it is because the remedies which I am prepared myself to adopt have been chiefly used by those who belong to the Homeopathic school, while I am not aware that I have any course to recommend which might not be followed by any practitioner without endangering his reputation for

orthodoxy.

The ill-success which has hitherto attended all the various modes of treatment adopted, and the division of opinion amongst ordinary practitioners, ought to deliver us all from bondage to a mere routine. One set of practitioners calls loudly for astringents, another set, headed by Dr. Geo. Johnson, calls still more loudly for mild aperients; one party trusts wholly to stimulants, another party considers them decidedly hurtful. The larger number, perhaps, rely chiefly upon alteratives, and with a little better success than their brethren. Under all these various methods, adopted at the different London hospitals in 1854, the average mortality was 59.6 per cent., being about 1 per cent. below that which has been attained in the London Hospital during the past fortnight. The lowest mortality which occurred in any hospital in London in 1854 was 36, with one exception —that exception was the London Homocopathic Hospital, situate in a district (Golden Square) in which the disease raged with fearful intensity. The mortality at this hospital was 16.4 per cent., being less than one half of that which occurred at any other hospital, and nearly one-fourth of the average of the other hospitals. A gentleman, Dr. Mac Loughlin, was appointed, with others, by the Royal College of Physicians of London, at the instigation of the Board of Trade, to inspect the various hospitals and to ascertain the modes of treatment and the results. In fulfilment of his duty he visited the hospital named. The returns were

duly and honourably made by him, but in making their report to the Board of Trade, the College of Physicians, to its eternal disgrace, erased from Dr. Mac Loughlin's report the results from the London Homoeopathic Hospital. By special vote of the House of Commons they were restored. We have Dr. Mac Loughlin's own certificate in these words:—
"That there may be no misapprehension about the cases I saw in your hospital, I will add, that all I saw were true cases of Cholera, in the various stages of the disease; and that I saw several cases which did well under your treatment which I have no hesitation in saying would have sunk under any other."

Many hits have been made about treating Cholera with globules. I assure my readers that if I were ill with Cholera, I would not like to be treated with globules, and they need not fear that I am going to recommend to them any sort of globulism. In September, 1831, Hahnemann wrote:-"Any one, the instant any of his friends take ill with cholera, must immediately treat them with Camphor." The three epidemies of 1831-32, 1848-49, and 1854, have abundantly shown the wisdom of that advice. The camphor was ordered to be given so soon as the first decided symptoms of the disease set in, in doses of five drops of a strong spirituous solution every half-hour or quarter of an hour, according to the severity of the symptoms, and to be continued until danger was past or until other remedies were more especially demanded by the symptoms. Such was the course adopted at the London Homocopathic Hospital. This remedy however has usually been considered only available during the earliest stages of the disease, and when in spite of this treatment the vomiting and purging have increased or collapse has set in, other medicines, such as Ipecacuanha, Arsenic, Veratrum Album, and Acetate of Copper, have come into use. These were the medicines chiefly used at the London Homeopathic Hospital with such brilliant results. Beyond this, we have Dr. Mac Loughlin's testimony that at the other hospitals in which the mortality was below the average, Camphor in the one case, and Ipecacuanha in the other, were chiefly relied upon.

But during the last few months the startling announcement has been made by Dr. Rubini, a homoeopathic physician in Naples, that in the two epidemics of 1854 and 1865, which have prevailed in Italy, he has had the good fortune to treat upwards of 500 cases of Cholera without a single death. Such a statement so opposed to all previous experience and surrounded with so much difficulty, demands the closest investigation. In the experience of most practitioners cases have been brought in which gave scarcely an opportunity of treatment, for the patients were dying when first seen, and possibly died before a single remedy could be administered. It would be as unwise to receive such a statement credulously, as it would be wicked to reject it without examination. We have a right to enquire into the character of the assertor of such startling news, and to know how far his assertions can be credibly corroborated, and how they can be reconciled with what we have ourselves observed.

As to the question of Dr. Rubini's personal credibility, I have the honour of acquaintance with gentlemen to whom he is personally known. Their testimony allows no suspicion to exist of wilful misrepresentation, while the witness borne to his professional attainments makes it absurd to doubt the accuracy of his diagnosis in a disease which once seen can never be mistaken. Again, if we ask how far his assertions are corroborated, the circumstances are such that peculiar opportunities are given for confirma-200 of these cases were treated in the Royal Almshouse and Hospice of Naples: that these cases were so treated and that they all recovered, is certified by the Major Commandant, the Captain Commandant, and the General Commandant of the establishment, the latter of whom expresses the warmest thanks to Dr. Rubini for his gratuitous services. The Major Commandant further states that several of these cases were especially severe. 166 other patients were soldiers of the Italian army, in the 3rd Swiss regiment, and were treated in the Infirmary of their Corps. of their treatment and recovery are certified by the Colonel of the regiment, his certificate being accompanied with a list of all the soldiers in his regiment who had been seized with Cholera, a portion of whom had been sent to the Hospital of the Trinity at Naples, of which portion 90 per cent. died. Beyond this we have reports from four other Italian physicians, who treated their cases in the same fashion as Dr. Rubini—Dr. Sabatini who treated 27 patients, Dr. Salutanzii who had 56, Dr. Spitelli who had 80, and Dr. Ricci who had 1. All their patients recovered. We can only (apart from the treatment) account for this marvellous success by the fact that a large number of the patients were soldiers under constant surveillance, and that at the first appearance of the disease they were at once put under treatment.

The sole medicine used by Dr. Rubini was Camphon. The success which attended his treatment must necessarily appear much more marvellous to those who have never used camphor except in conjunction with other powerful drugs, than to those who have had a large experience of the power which this medicine possesses over the disease in its early stages. Even to them, unless so fully authenticated and proceeding from such a source, the statements would appear incredible; but then they have not been in the habit of using it in the last stages of the disease, nor have they pushed it so heroically as Dr. Rubini has done. He maintains that the ordinary forms in which it is prepared are insufficient, and that such a saturated solution as we have before described must be used. In the case of an old man in an advanced state of collapse, it was given in teaspoonful doses every five minutes, drop doses having had no effect.

How far the same mode of treatment may be as successful in this country remains to be proved. For my own part, should it be my lot to come into contact with the disease, I shall be prepared to use it much more boldly than heretofore, though my own experience and observation have long convinced me that this remedy is of more value than all others put together. I should however by no means be disposed to undervalue those other remedies which have been proved to be of greatest worth.

I have before observed that in many cases diarrhoan sets in for some time before really Choleraic symptoms appear, and that diarrhoan often exists largely during a

Cholera epidemic without any such symptoms following. What is to be done for such diarrhea?

The first remedy which I propose is Aconite.* Four to six drops of Fleming's Tincture should be mixed in half-a-pint of water, of which one tablespoonful is to be taken after every movement of the bowels, or every two hours. The symptoms which indicate this medicine are giddiness, pressive headaches, nausea, coldness followed by increased heat, vomiting of bitter and greenish matter, thirst, frequent pulse, and mental agitation. The diarrhea

is not accompanied with much pain.

2. Iris Versicolor. The diarrhea appears principally at night. There is much pain in the pit of the stomach, around the navel and lower part of the belly, at or before every fit of vomiting or purging. The stools which indicate its use are greenish or bilious, and accompanied with a burning sensation at the termination of the bowels. In cases of ordinary English Cholera, I have used it with the best effects. A few drops of the Tincture—first decimal dilution—should be mixed in a tumblerful of water, of which a tablespoonful should be given every one or two hours, according to the urgency of the symptoms.

In some cases, rather than diarrhea we have severe vomiting. It may follow upon too hearty or indigestible a meal. In such case warm water should be freely given to encourage the vomiting, and *Tincture of Ipecacuanha*—first centesimal dilution—should be given, prepared as directed for

Iris Versicolor, every quarter of an hour.

During such attacks of diarrhea or vomiting the diet should be of the lightest possible kind; arrowroot, sago, boiled rice with milk, with a little cold weak brandy and water occasionally if there is faintness; toast and water may be taken to allay thirst. If the symptoms are severe the patient should be kept warm in bed.

If by these means the symptoms do not abate, the treatment for Cholera should be commenced. Let *Camphor* be at once administered—five drops on a piece of sugar, washed down with a little cold water, every quarter

^{*} The Aconite must be used with great care; it is a violent poison.

of an hour. If the patient become prostrated and cold, if the face grow pale or livid, or cramps begin to be felt, continue the same remedy, and if treated at home let him be placed warm in bed between the blankets, keeping the windows open and allowing fresh air to pass freely through the room prepared as before advised. If there is thirst, let him drink iced water or suck pieces of ice. Place hot flannels or a linseed and mustard poultice over the pit of the stomach and abdomen, and apply hot bottles to feet and legs. Rub the cramped limbs well with Chloroform, afterwards cover them with flannel. Alcoholic stimulants are mostly useless—they may be hurtful. If the symptoms increase towards the stage of collapse, increase the doses of Camphor to 10, 20, or 30 drops every 10 or 5 minutes, and give the medicine the fullest chance.

If however, in spite in of all, collapse fully set in, and if after careful perseverance 3 or 4 hours pass and matters do not improve, I should feel called upon to resort to other means.

Tincture of Veratrum Album and Arsenic, or Veratrum and Acetate of Copper should be given in alternation—the Arsenic or Copper being given in the first trituration, the Veratrum in the first dilution, (one grain of the triturations being dissolved in small quantities of iced water for each dose, a few drops of the Tincture being mixed in 3 or 4 tablespoonsful of water and a teaspoonful being given as the dose,) administering the medicines every ten minutes or quarter of an hour. The especial indications for the Arsenic* are burning pains in the stomach extending to the throat, frequent desire to pass water or retention of urine, with increase of collapse. The Copper will be particularly demanded for excessive cramps. Nothing should be taken but ice and iced water.

In the period of reaction Aconite may again be called for against the inflammatory or febrile symptoms which may exist, but in much smaller doses than indicated above. A few drops of the first dilution prepared in the same way

^{*} The great value of Arsenic is vouched for by Dr. C. Black in the "Lancet" of October 2, 1857. In 1831 Hufeland wrote—"If there is any truth in Homocopathy, Arsenic is the remedy for Cholera."

will probably suffice. For vomiting use *Ipecacuanha*, for diarrhea, *Arsenic*, *Iris Versicolor*, or *Mercury* according to symptoms. If there is any tendency to relapse, return at once to the Camphor. If any unpleasant effects from the Camphor remain behind, they may be removed by a few drops of Tincture of Opium or by a cup of black coffee.

Great care must be taken with regard to diet during a return to health; slight errors may induce fatal relapse. After the feverishness has passed away, light broths, beef tea, and farinaceous food may be given, and by degrees

stronger food.

The great simplicity which I have used in describing the mode of treatment to be adopted must not be taken as a sanction for any attempt to dally with the disease by what is called domestic treatment. In all cases, the best advice should be sent for at the earliest possible moment, but as in the country it is not always so easy to obtain immediate professional aid, and as delay may be fatal, it has seemed better to give the directions in a way which should be plain to all, while at the same time it must be understood that no general directions can be applicable to every case.

August 4, 1866.

ERRATUM.

Page 4, line 25, for "of cavalry regiment," read "of a cavalry regiment."

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